

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04B7/08 H04B7/06 H04L1/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04B H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No.    |
|------------|---|--------------------------|
| X          | WO 98 09381 A (UNIV LELAND STANFORD JUNIOR) 5 March 1998 (1998-03-05)   | 1-16,<br>31-34,<br>37-39 |
| Y          | abstract; claims 1-3,12; figures 6A,6B,7<br>page 3, line 28 -page 7, last line<br>page 19, line 6 - line 28<br>---  | 29,30                    |
| Y          | BAUM K L ET AL: "A comparison of differential and coherent reception for a coded OFDM system in a low C/I environment"<br>GLOBAL TELECOMMUNICATIONS CONFERENCE, 1997. GLOBECOM '97., IEEE PHOENIX, AZ, USA 3-8 NOV. 1997, NEW YORK, NY, USA, IEEE, US, 3 November 1997 (1997-11-03), pages 300-304, XP010254599<br>ISBN: 0-7803-4198-8<br>the whole document<br>---<br>-/-- | 29,30                    |

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## ° Special categories of cited documents:

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\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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Date of the actual completion of the international search

11 October 2002

Date of mailing of the international search report

18/10/2002

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Katruff, M

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|------------|---|-----------------------|
| Y          | US 6 131 016 A (SOLLENBERGER NELSON RAY ET AL) 10 October 2000 (2000-10-10)<br>abstract; figure 2A<br>column 1, line 41 -column 2, line 11;<br>claim 1<br>----  | 29,30                 |
| A          | US 5 973 642 A (SOLLENBERGER NELSON RAY ET AL) 26 October 1999 (1999-10-26)<br>column 1, line 7 -column 4, line 9<br>----   | 17-30,<br>35,36       |
| A          | US 5 844 922 A (WOLF JACK KEIL ET AL) 1 December 1998 (1998-12-01)<br>abstract<br>column 1, line 15 -column 3, line 11<br>----  | 5                     |
| A          | JOENGREN G ET AL: "UTILIZING QUANTIZED FEEDBACK INFORMATION IN ORTHOGONAL SPACE-TIME BLOCK CODING"<br>GLOBECOM'00. 2000 IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE. SAN FRANCISCO, CA, NOV. 27 - DEC. 1, 2000, IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, NEW YORK, NY: IEEE, US, vol. 2 OF 4, 27 November 2000 (2000-11-27), pages 995-999, XP001017234<br>ISBN: 0-7803-6452-X<br>abstract; figure 1<br>page 996, left-hand column, paragraph 1<br>-page 997, left-hand column, paragraph 1<br>---- | 1-44                  |
| P,X        | WO 01 71928 A (QUALCOMM INC) 27 September 2001 (2001-09-27)<br>abstract; claims 20-22,40; figures 1B,3<br>page 14, line 14 - line 28<br>page 18, line 26 - line 33<br>page 3, line 16 -page 5, line 33<br>-----   | 1-13,29,<br>30,39     |

INTERNATIONAL SEARCH REPORT  
Information on patent family members

International Application No  
PCT/US 02/08733

| Patent document<br>cited in search report |   | Publication<br>date |    | Patent family<br>member(s) |  | Publication<br>date |
|---|---|---------------------|----|----------------------------|--|---------------------|
| WO 9809381                                | A | 05-03-1998          | AU | 4238697 A                  |  | 19-03-1998          |
|   |   |                     | CA | 2302289 A1                 |  | 05-03-1998          |
|   |   |                     | EP | 0920738 A1                 |  | 09-06-1999          |
|   |   |                     | EP | 0931388 A2                 |  | 28-07-1999          |
|   |   |                     | JP | 2001505723 T               |  | 24-04-2001          |
|   |   |                     | WO | 9809385 A2                 |  | 05-03-1998          |
|   |   |                     | WO | 9809381 A1                 |  | 05-03-1998          |
|   |   |                     | WO | 9809395 A1                 |  | 05-03-1998          |
|   |   |                     | US | 6377631 B1                 |  | 23-04-2002          |
|   |   |                     | US | 6452981 B1                 |  | 17-09-2002          |
|   |   |                     | US | 6144711 A                  |  | 07-11-2000          |
| US 6131016                                | A | 10-10-2000          | CA | 2245240 A1                 |  | 27-02-1999          |
| US 5973642                                | A | 26-10-1999          | US | 6327314 B1                 |  | 04-12-2001          |
| US 5844922                                | A | 01-12-1998          | US | 6016568 A                  |  | 18-01-2000          |
| WO 0171928                                | A | 27-09-2001          | AU | 4934401 A                  |  | 03-10-2001          |
|   |   |                     | WO | 0171928 A2                 |  | 27-09-2001          |